



Clean Diesel Technologies, Inc.

Powering a new generation of clean vehicles

"A leading provider of environmentally-proven technology and solutions for the global emission reduction market, sharing our success with our stakeholders and our community, paving the way for today's and future generations"



Clean Diesel Technologies, Inc.

August, 2005

Platinum Plus Emission Reduction Systems

Platinum Plus FBC



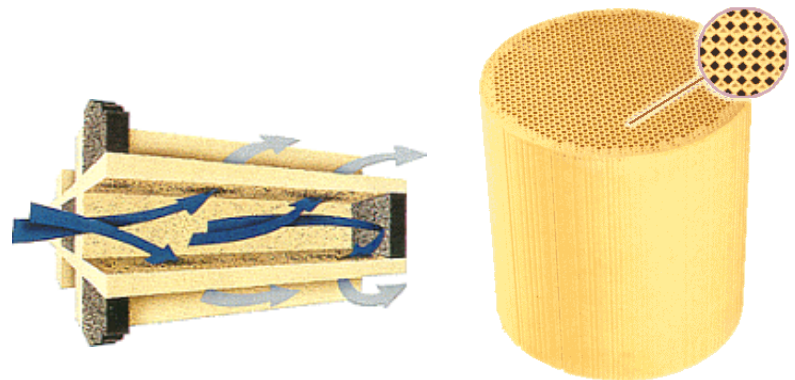
Diesel Oxidation Catalyst



Catalyzed Wire Mesh Filter



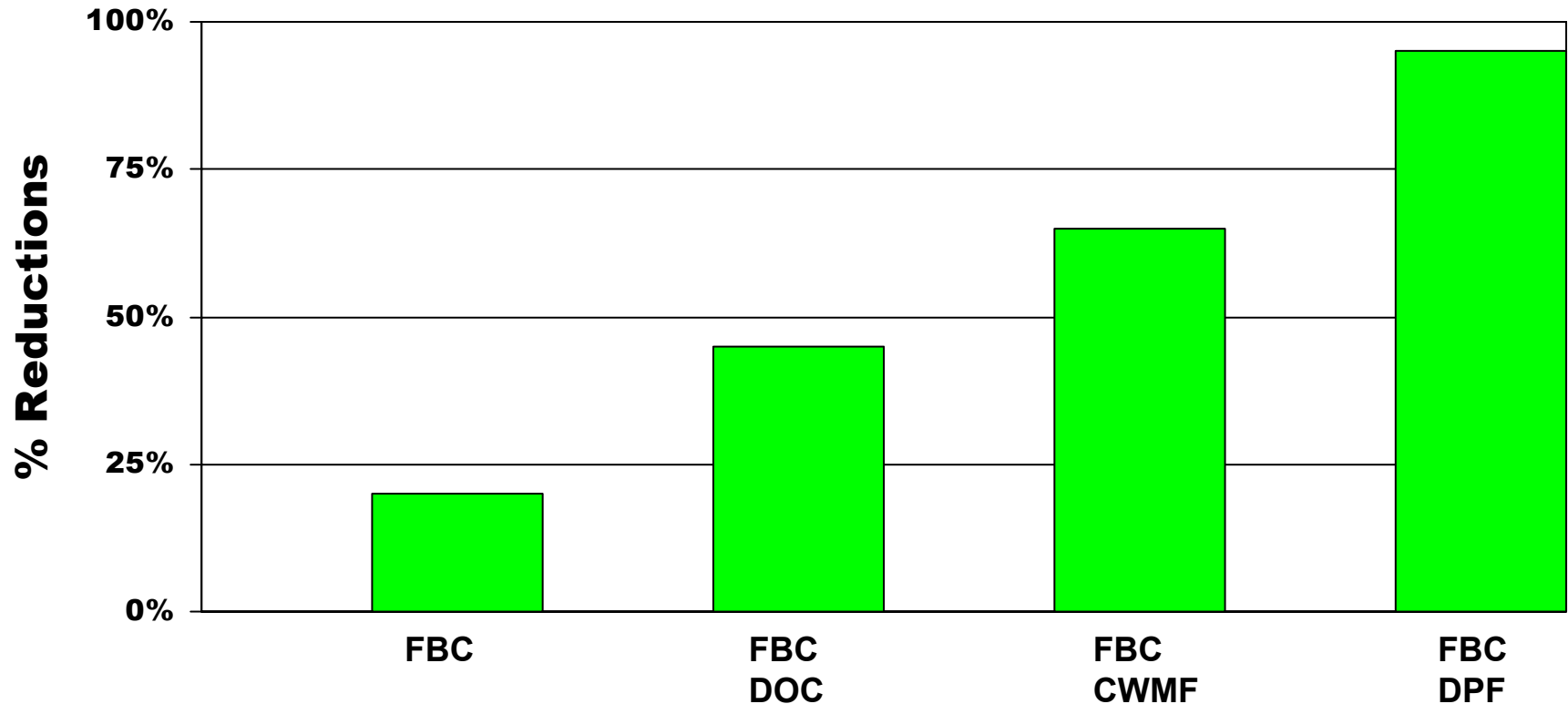
Diesel Particulate Filter



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Particulate Emission Reduction Results

(Typical Performance with ULSD)



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What is Platinum Plus® (FBC)

- Fuel borne Platinum/Cerium catalyst that takes catalytic activity into the combustion chamber which
 - Promotes more complete combustion
 - Reduces engine out emissions
 - Improves fuel economy by 2-8%
- Registered with U.S. EPA for use in on-highway fuel
- Compatible with all diesel fuels (No.2D, K-1, ULSD, and bio-diesel)
- 30 million miles of trouble free use
- Enhances the performance of particulate emissions control devices (DOC/CWMF/DPF)



Platinum Plus FBC/DOC System EPA Verified

Platinum Plus FBC



Diesel Oxidation Catalyst



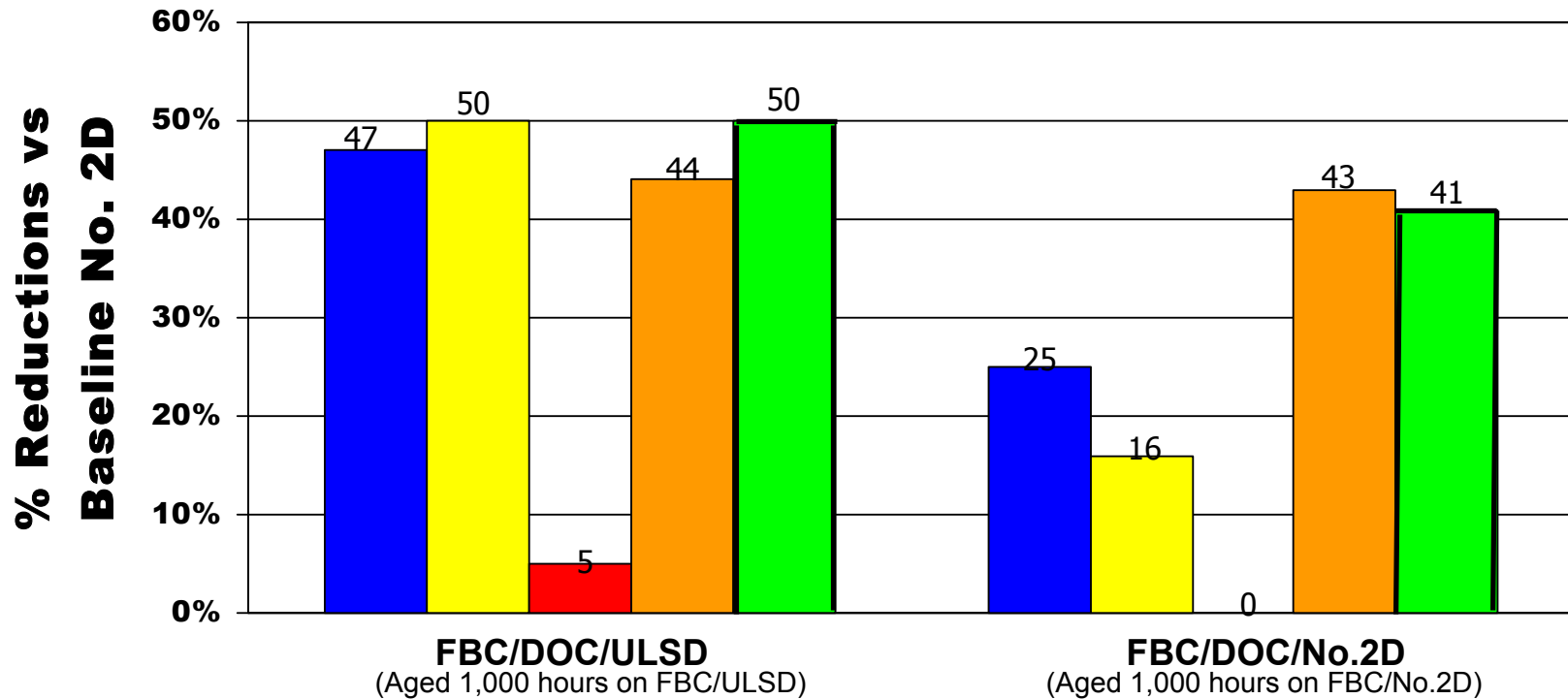
- Verified for use with treated No. 2D or ULSD
- Easily installed as muffler replacement
- EPA registered fuel borne catalyst (FBC) is easily added to vehicle tanks or bulk fuel storage
- FBC reduces engine out emissions and maintains highest DOC activity
- Average fuel economy improvement offsets cost of FBC
- Over 2,000 applications and 50 million miles of trouble free FBC use



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Platinum Plus[®] Purifier (FBC/DOC)

Emission Test Results in Support of EPA Verification



- = HC
- = CO
- = NO_x
- = NO₂
- = PM

No. 2D = 350ppm Sulfur
ULSD = 15ppm Sulfur
FBC = Platinum/Cerium Fuel Borne Catalyst
DOC = Lightly Catalyzed Diesel Oxidation Catalyst



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Platinum Plus Purifier FBC/DOC Retrofit



- Beverage Delivery
- Pennsylvania
- Fuel Pump Dosing system



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Platinum Plus Purifier FBC/DOC Retrofit



- School Bus
- New England
- Hand treat bulk fuel supply



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Platinum Plus Purifier FBC/DOC Retrofit



- Star Construction
- Northeast
- Hand treated with cylinders



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Platinum Plus Purifier FBC/DOC Retrofit



- 12 Over-the-road Class-8 Refuse Hauling trucks
- South Florida
- Hand treat Bulk fuel supply



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Platinum Plus Purifier FBC/DOC Retrofit

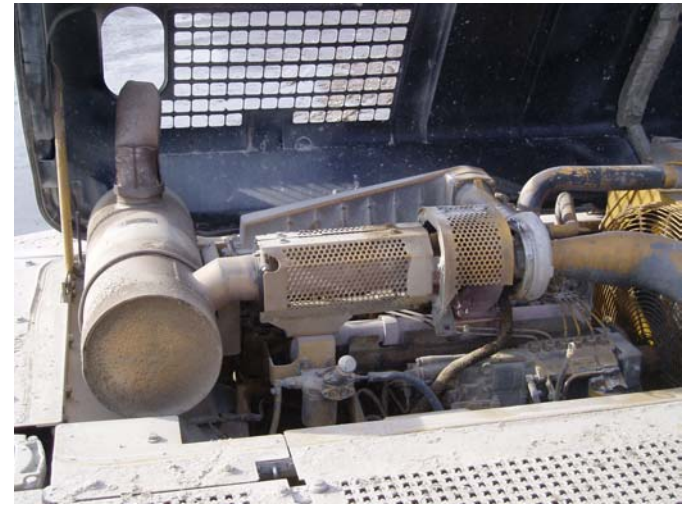


- Landfill Operation
- Northeast
- On-Board Dosing system



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Platinum Plus Purifier FBC/DOC Retrofit



- Refuse Transfer Station
- Northeast
- Wet-Hose delivery of treated fuel



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Platinum Plus Purifier FBC/DOC Retrofit



- Refuse Collection
- Pennsylvania
- Fuel Pump Dosing system



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Platinum Plus FBC/CWMF System

Platinum Plus FBC



Catalyzed Wire Mesh Filter



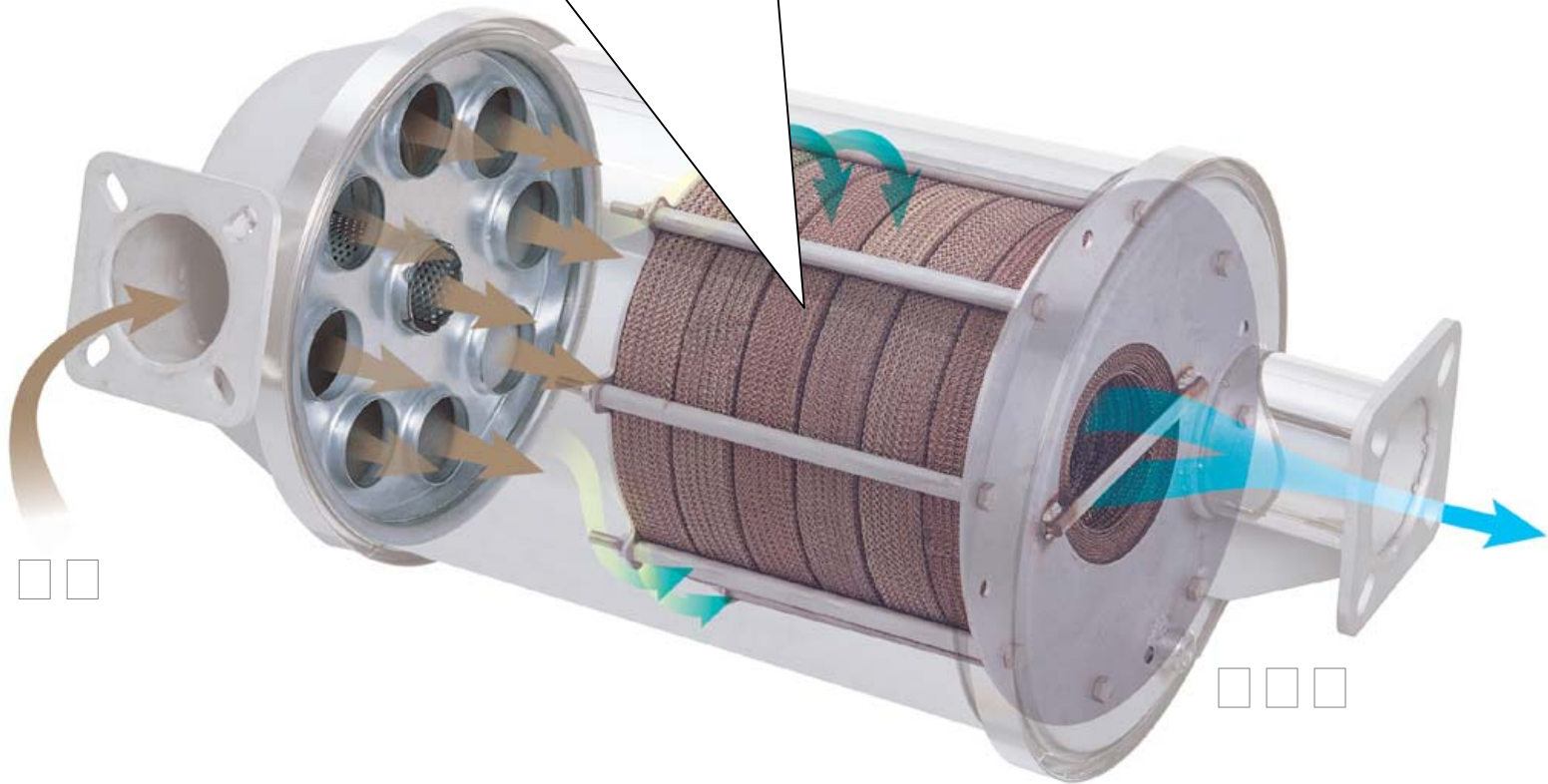
- EPA verified for 55-75% PM Reduction
 - 1991-2003 Engines
 - No. 2D or ULSD
- Lightly catalyzed for low NO₂
- Low temperature operation
 - 25% > 225°C on ULSD
 - 40% > 225 °C on No. 2D
- Proven durability
- Level 2 application submitted to CARB



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PM collection and filter regeneration

- 1) Platinum Plus oxidizes soot
- 2) Deep bed filter helps to oxidize soot



FBC/CWMF: 65-75% PM Reduction



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Platinum Plus FBC/CWMF Retrofit



- Beverage Delivery
- 12 Month Demonstration
- Texas
- Delivery of treated fuel



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Platinum Plus FBC/CWMF Retrofit

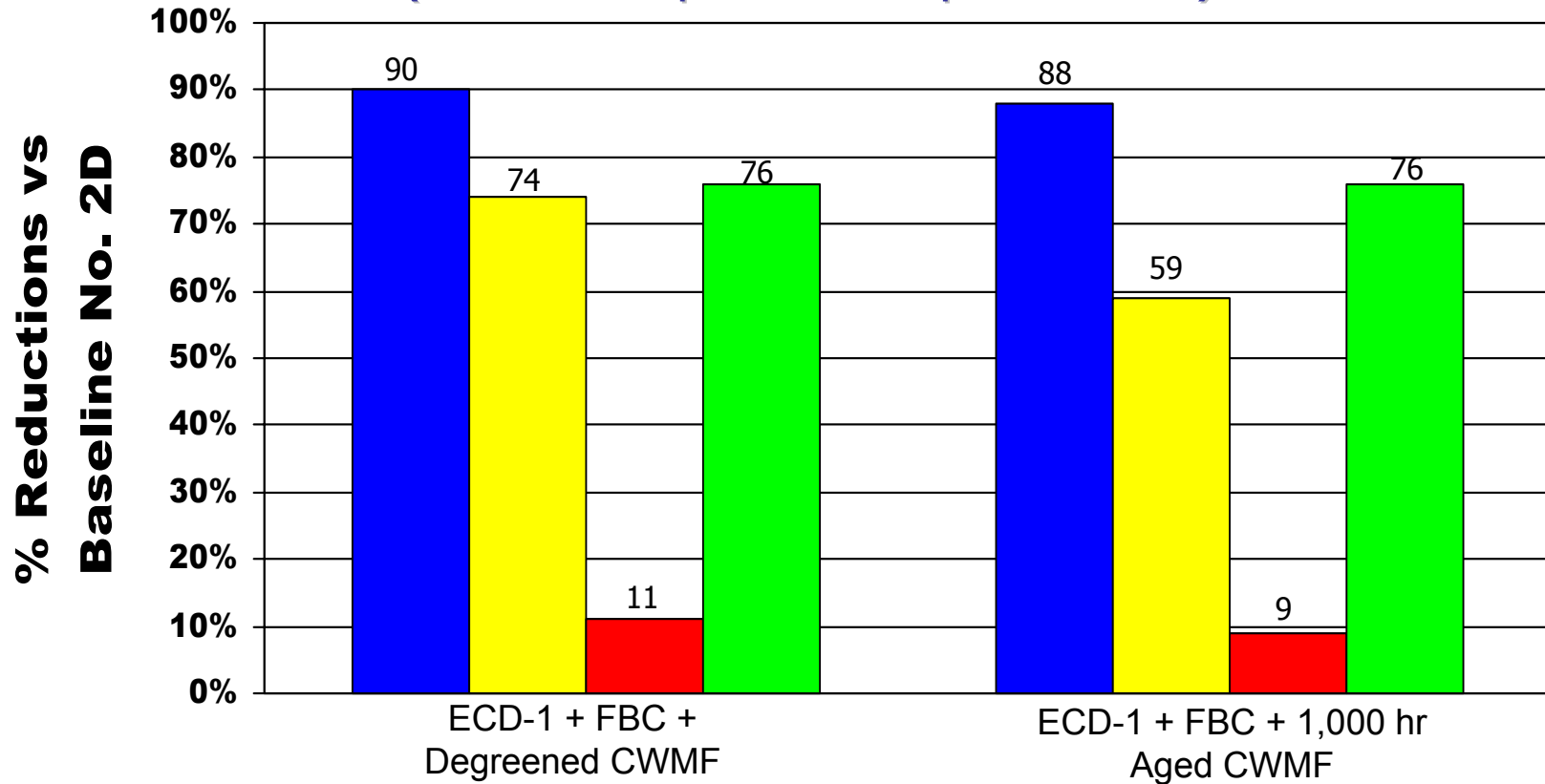


- Refuse Trucks
- 18 Month Demonstration
- California
- Fuel Pump Dosing System



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Emissions Reduction for FBC/CWMF/ULSD versus Baseline No. 2D 1991 Certified Cummins 8.3 (Mean of Triplicate Composite FTPs)



- = HC
- = CO
- = NO_x
- = PM

No. 2D = 350ppm Sulfur
ECD-1 = <15ppm Sulfur

FBC = Pt/Ce Fuel Borne Catalyst
CWMF = Lightly Catalyzed Wire Mesh Filter



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Benefits of Bimetallic FBC Based Filter Systems

- Lowers soot oxidation temperature to 280-320°C
- Allows lower catalyst loading at 3-5 gr/cu ft versus 60-90 gr/cu ft
- Reduces frequency and length of supplemental regeneration
- Bimetallic minimizes ash from FBC due to low dose rates 8 ppm versus 15-30 ppm
- Reduces frequency of filter cleaning
- Lowers backpressure by reducing soot loading to DPF
- Concentrated to 1 gallon treats 1,500 gallons of fuel



Platinum Plus Dosing Options

Manual Addition to Fuel Tanks



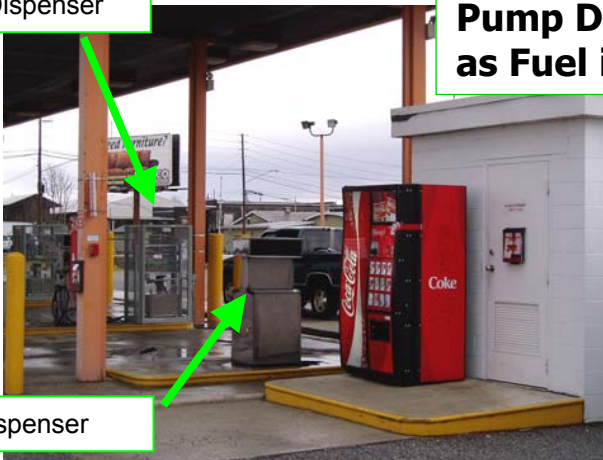
Pre-Treated Fuel Delivery by Fuel Supplier



FBC Dispenser

Pump Dosing Systems Deliver FBC as Fuel is Dispensed

Fuel Dispenser



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Platinum Plus Dosing Options

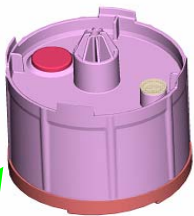
On Board Reservoir



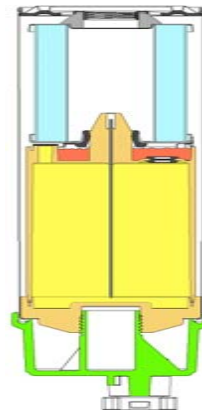
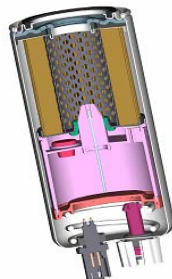
Timer and Valve

- Low Cost CDT on board dosing system provides FBC treatment regardless of fueling choice

- “Smart Fuel Filter” with FBC under development with Fleetguard
- Designed to deliver FBC during normal service interval



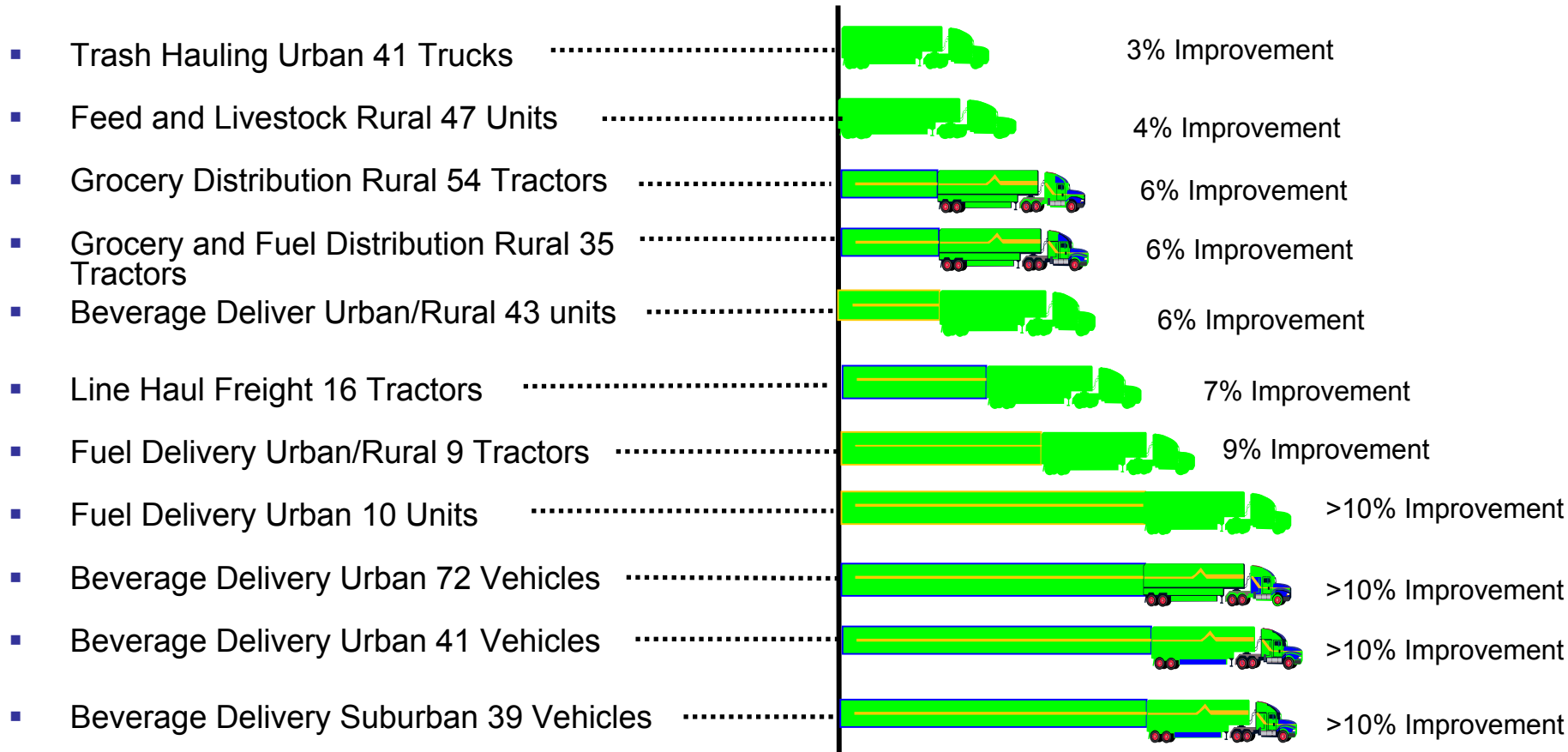
FBC Reservoir



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Platinum Plus® Fleet Test Summary

(Average MPG Improvement = 8%)



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